

Remarks

The Office Action objected to the specification as failing to provide proper antecedent basis for claimed subject matter. The Office Action also objected to the drawings as failing to show every feature of the invention specified in the claims. The Office Action also rejected claims 31-32, 42-43, 46-53, 56-60, 62, 63, 77-78, and 80-82 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Office Action also rejected claims 20, 24-26, 31, 35-37, 42-44, 46-50, 52-53, 56-58, 63, 75-88 under 35 U.S.C. §103(a) as being unpatentable over the U.S. Patent 6,404,445 issued to Galea, et al. ("Galea") in view of the U.S. Patent 6,035,300 issued to Cason, et al. ("Cason"). The Office Action also rejected 21 and 22 under 35 U.S.C. §103(a) as being unpatentable over Galea in view of Cason and further in view of the U.S. Patent 6,564,218 issued to Roth ("Roth"). The Office Action also rejected claims 23, 32, and 51 under 35 U.S.C. §103(a) as being unpatentable over Cason in view of Galea and further in view of the U.S. Patent 7,093,263 issued to Sexton, et al. ("Sexton"). The Office Action also rejected claim 38 under 35 U.S.C. §103(a) as being unpatentable over Galea in view of Cason and further in view of the U.S. Patent 5,818,936 issued to Mashayekhi ("Mashayekhi"). The Office Action also rejected claim 59-62 under 35 U.S.C. §103(a) as being unpatentable over Galea in view of Cason and further in view Mashayekhi.

In this Amendment, Applicants have amended claims 20-22, 31, 35, 37, 42, 44, 46, 49-52, 58, 59, 80, 81, 83, 84, 86, and 87. Applicants do not surrender any equivalents to any amended limitation or elements of any claim. Applicants have not added or

canceled any claims. Accordingly, claims 20-27, 31-32, 35-38, 42-44, 46-53, 56-63, and 75-88 will be pending after entry of this Amendment.

I. Objection to Specification

The Office Action objected to the specification stating that the specification fails to provide proper antecedent for claimed subject matter. Specifically, the Office Action states that claims 31 and 42 recite “a computer readable medium,” but that the specification of the instant application fails to provide proper antecedent basis for the limitation “computer readable medium”. *See*, Office Action, pages 9 and 10.

Applicants respectfully disagree with the objection to claims 31 and 42. MPEP § 608.01(o), on which the objection is based, states that “[t]he meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import...”. MPEP § 608.01(o) relates to the meaning of a term as opposed to the precise recitation of the term in the claim. The meaning of a term in a claim “must be given their plain meaning unless the plain meaning is inconsistent with the specification” where “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application”. *See*, MPEP § 2111.01 and *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005).

Applicants submit that the specification contains numerous examples and terms that conform with and support the meaning that one of ordinary skill gives to the term “computer readable medium”. For example, the specification states that a computer

system acting as either the server or client includes memory, such as RAM, and disk, such as a hard drive. *See*, specification, page 30, lines 1-15. It is clear to one of ordinary skill in the art that the meaning of the term “computer readable medium” as used in claims 31 and 42 is consistent with the specification and the examples provided in the specification. Moreover, the meaning of the term “computer readable medium” is clear to one of ordinary skill in the art as evidenced by the over 50,000 issued patents that contain such a term.

Furthermore, MPEP § 608.01(l), states that “[i]n establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims if their content justifies it”. Applicants respectfully submit that original claim 17 filed with the parent application 09/618,390, now issued as patent 6,738,077, recites the term “computer readable medium”. Therefore, in accordance with MPEP § 608.01(l), Applicants respectfully submit that the originally filed disclosure provides proper support for the term “computer readable medium”.

With reference to claim 82, the Office Action states that the specification fails to provide proper antecedent basis for the limitation reciting “wherein said request for data to populate the user interface element is received automatically form the client prior to receiving a transaction or a query form the user of said client.” *See*, Office Action, page 10. Applicants respectfully submit that the specification does provide antecedent basis for the limitation at issue. Specifically, page 12, lines 16-19 of the specification state that “[o]nce the controllers have generated the elements of the user interface, it must be populated with certain data from the database. The client makes this request,

automatically or manually, for data, to the server (block 190).” In view of the foregoing, Applicants respectfully request withdrawal of the objection to the specification.

II. Objection to Drawings

The Office Action objected to the drawings stating that the drawings fail to show every feature of the invention specified in the claims. Specifically, the Office Action states that the figures do not show the limitation for a “computer readable medium” as used in claims 31 and 42. *See*, Office Action, page 10.

Applicants respectfully submit that figure 5 of the application illustrates a computer readable medium as used in claims 31 and 42. As stated in the specification, figure 5 illustrates components of a computer system that may act either as a server or as a client. *See*, specification, page 28, lines 23-25. One component of the computer system illustrated in figure 5 is memory 511. As is clear to one of ordinary skill in the art the feature, memory 511, illustrates one example of a computer readable medium. Another component of the computer system illustrated in figure 5 is disk 518. As is clear to one of ordinary skill in the art the feature, disk 518, illustrates another example of a computer readable medium.

In view of the foregoing, Applicants respectfully submit that the figures show all features of the claimed subject matter including multiple examples of a computer readable medium. As such, Applicants request withdrawal of the objection to the figures.

III. § 101 Rejection to claims 31-32, 42-43, 46-53, 56-60, 62, 63, 77-78, and 80-82

The Office Action rejected claims 31-32, 42-43, 46-53, 56-60, 62, 63, 77-78, and 80-82 under § 101 stating that the claimed invention is directed to non-statutory subject

matter. In rejecting claims 31 and 42, the Office Action states that the claims are directed to a computer readable medium, but the specification fails to limit the term computer readable medium. The Office Action further states in giving the term the broadest reasonable interpretation, the claims include wireless signals and wave. *See*, Office Action, page 11.

Applicants respectfully submit that the Office Action is improperly broadening the scope of the term computer readable medium. The Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) recognized that claims are to be interpreted by giving the claims their broadest reasonable interpretation “in light of the specification” as it would be interpreted by one of ordinary skill in the art”. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, (Fed. Cir. 2004) (emphasis added). Applicants respectfully submit that the specification does not provide support to reasonably interpret the term “a computer readable medium of a computer system implementing a client/server application” as encompassing carrier signals and waves. However, there is ample support within the specification to reasonably interpret the term “a computer readable medium of a computer system implementing a client/server application” as encompassing memory or disk. For example, the specification states that the “computer system 510 has a processor 512 and a memory 511, such as RAM, which is used to store/load instructions, addresses and result data as desired”, “[t]he function of storing the database and database model may be performed by disk 518...”, “[o]nce the description is downloaded, it can be interpreted in memory 511 (in a browser execution instance or memory space, for example)...”. Accordingly,

when giving the claims their broadest reasonable interpretation in light of the specification, Applicants submit that claims 31 and 42 are directed to statutory subject matter.

In rejecting claim 46, the Office Action states that the claim is directed to a system, but that the system is software per se. Applicants have clarified the limitations of claim 46 to recite a system that includes a first computer system and a second computer system. A computer system as is well known in the art and as described within the specification includes a machine and is therefore not software per se. Accordingly, Applicants respectfully submit that claim 46 is directed to statutory subject matter.

In rejecting claim 52, the Office Action states that the claim is directed to a computer and computer is given the broadest reasonable interpretation to mean a computer system in view of figures 2 and 3. *See*, Office Action, page 12. Applicants submit that such an interpretation of figures 2 and 3 is inconsistent with the specification, figure 5, and the ordinary meaning that one of ordinary skill in the art gives to the term “computer” or “computer system”.

First, figure 2 describes “a distributed client-server-database topology” that includes a “single application server 200 connected to a first client 215 and a second client 225”. *See*, specification, page 14, lines 13-18. Accordingly, figure 2 does not provide support for interpreting “computer” or “computer system” as software per se.

Second, figure 3 describes “a flowchart showing default rules for creating a user interface description given a database model”. *See*, specification, page 18, lines 25-26. Accordingly, figure 3 does not provide support for interpreting “computer” or “computer

system” as software per se.

Third, figure 5 clearly defines the term computer system as used within the metes and bounds of the application. “Figure 5 is a diagram of an exemplary computer system that may act as an application server and/or client according to one or more embodiments of the invention.” *See*, specification, page 28, lines 23-25. The computer system of figure 5 includes a processor, memory, disk, network interface card, and a display. These components are not software per se but physical machine components. Therefore, the Office Action’s assertion that the terms “computer” and “computer system” may be interpreted as software per se is clearly inconsistent with the disclosure of figure 5. *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997) [“During patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification”].

Fourth, one of ordinary skill in the art will not interpret the terms “computer” and “computer system” as software per se. MPEP § 2111.01 states that the words of a claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. Applicants submit that the specification does not define the terms computer or computer system as software per se. As shown above, figures 2 and 3 do not support the Examiner’s assertions. Furthermore, the plain meaning of the term computer or computer system does not support a meaning of software per se. Accordingly, Applicants submit that claim 52 is directed to statutory subject matter.

In rejecting claim 58, the Office Action states that the claim recites “to generate the first user interface” and that such a claim is directed to intended use and not actually

generating a user interface. *See*, Office Action, page 13. Applicants have amended to claim 58 to recite “generating a first description” and “generating a second description”. Applicants respectfully submit that claim 58 transforms underlying subject matter to a different state (e.g., to generate the different descriptions). In view of the foregoing, Applicants submit that claim 58 is directed to statutory subject matter.

In rejecting claim 59, the Office Action states that the claim is directed to “receiving user authentication information” and fails to transform underlying subject matter to a different state or thing. *See*, Office Action, page 13. Applicants have amended to claim 59 to recite “generating a first description customized according to the first user’s roles... and a second description customized according to the second user’s roles...”. Applicants respectfully submit that claim 59 transforms underlying subject matter to a different state (e.g., to generate the different descriptions). In view of the foregoing, Applicants submit that claim 59 is directed to statutory subject matter.

In rejecting claim 80, the Office Action states that the claim is directed to intended use and is not actually “generating” a user interface. *See*, Office Action, page 13. Applicants have amended to claim 80 to recite “automatically generating a description of said user interface based on the current data model”. Applicants respectfully submit that claim 80 transforms underlying subject matter to a different state (e.g., to generate the different descriptions). In view of the foregoing, Applicants submit that claim 80 is directed to statutory subject matter.

Given that claims 32, 77, and 78 depend on claim 31, given that claims 43 and 44 depend on claim 42, given that claims 47-51 depend on claim 46, given that claim 63

depends on claim 63, given that claims 60 and 62 depend on claim 59, and given that claims 81 and 82 depend on claim 80, Applicants respectfully submit that these claims are directed to statutory subject matter for the reasons given above for the corresponding independent claims. Applicants request withdrawal of the § 101 rejection of claims 31-32, 42-43, 46-53, 56-60, 62, 63, 77-78, and 80-82.

IV. Rejection of claims 20-27, 31-33, and 75-79

The Office Action rejected claim 20 under §103(a) as being unpatentable over Galca in view of Cason. Claims 21-27, 75, and 76 are dependent directly or indirectly on claim 20.

Claim 20 recites a method for creating a description of a user interface that transacts with a database. The database has a data model that includes several entities. The method receives a request for the user interface from a client. After receiving the request, the method classifies the entities into entity types. In classifying, the method iteratively determines whether each entity satisfies a set of conditions. When an entity satisfies the set of conditions, the method classifies an entity as a particular entity type for which a use interface element is created within a particular window of a set of windows. The user interface element provides access to the entity through the user interface. The method creates the description of the user interface with at least one user interface element based upon the classification of the entities. The method distributes the description to the client in order allow the client to generate user interface elements of the user interface that permits a user to transact with the database.

For at least the following reasons, Applicants respectfully submit that Galca,

Cason, and their combination do not render claim 20 obvious. *First*, Applicants respectfully submit that Galca, Cason, and their combination do not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows.

The Office Action states that Galca does not explicitly teach “classifying the first entity as a first entity type upon determining that the first entity satisfies the first set of conditions”. *See*, Office Action, page 17. The Office Action then cites column 4, lines 29-57 of Cason stating that “primary keys are a first entity type and alternate keys and other types of keys are a second or other type of keys”. *See*, Office Action, page 19.

Applicants respectfully submit that the cited lines of Cason merely recite an exemplary database modeling syntax. *See*, Cason, column 4, line 11. The syntax includes primary keys and other keys. *See*, Cason, column 4, lines 29-33. However, the reference does not disclose or suggest classifying entities or keys as a particular entity/key type for which a user interface element is created within a particular window of a set of windows.

In fact, nowhere does the reference disclose or suggest using the keys (e.g., primary or other keys) in creating elements within a particular window of a user interface. As such, mere citation to two different keys does not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows.

Second, Applicants respectfully submit that Galca, Cason, and their combination do not render obvious receiving a request for a user interface from a client and after receiving the request, classifying entities into entity types. The Office Action cites to

column 5, lines 23-50 of Galea to suggest such a limitation. However, Galea explicitly teaches away from this limitation of claim 20. In Galea the alleged description of the user interface, the compiled domain tags that make up the interactive decision map, are created before a user request is ever received. For example, column 6, lines 52-58 state “[t]he user interface definition tags are merged with the configuration domain and relation definitions which are then compiled into an interactive decision map. The merge and compilation process binds the user interface and configuration data into the compiled database. When the user request information through the server 102, the compiled model is downloaded...”. As such, the compiled model of the user interface is created before the user request is received which is different than claim 20 which recites receiving a request for a user interface from a client and after receiving the request, classifying entities into entity types.

The Office Action also cites to column 4, lines 29-57 of Cason. However, as noted above, the cited lines merely recite a data model syntax. Cason does not disclose or suggest receiving a request for a user interface from a client and after receiving the request, classifying entities into entity types.

Accordingly, Applicants respectfully submit that Galea, Cason, or their combination does not render claim 20 unpatentable. As claims 21-27, 75, and 76 are dependent directly or indirectly on claim 20, Applicants respectfully submit that claims 21-27, 75, and 76 are patentable over the references for at least the reasons discussed above for claim 20. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 20-27, 75, and 76.

Furthermore, claim 31 was rejected along similar or the same rationale as claim 20. Accordingly, claim 31 is patentable over Galea, Cason, or their combination because the references do not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows, as argued above for claim 20. Additionally, the references do not render obvious receiving a request for a user interface from a client and after receiving the request, classifying entities into entity types, as argued above for claim 20. As such, claim 31 is patentable over the references. As claims 32, 33, and 77-79 are dependent directly or indirectly on claim 31, Applicants respectfully submit that claims 32, 33, and 77-79 are patentable over the references for at least the reasons discussed above for claims 31 and 20. Applicants respectfully request reconsideration and withdrawal of the rejections to claims 31-33 and 77-79.

V. Rejection of claims 35-38

In the Office Action, the Examiner rejected claim 35 under §103(a) as being unpatentable over Galea in view of Cason. Claims 36-38 depend directly on claim 35.

Claim 35 recites a method for generating a user interface on a client computer system that transacts with a database of a server computer system. The database has a data model that includes several entities. The method sends a request for the user interface from the client computer system to the server computer system. The method receives a description of the user interface at the client computer system. The description is based upon a set of conditions that classify the several entities into entity types. The classification of the entities into entity types is initiated by the request. When an entity

satisfies the set of conditions, the classification includes classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. The user interface element within the particular window provides access to the entity through the user interface. The method generates the user interface with at least one user interface element using the description of the user interface. The user interface allows the user to transact with the database.

For at least the following reasons, Applicants respectfully submit that Galea, Cason, or their combination does not render claim 35 obvious. *First*, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious receiving a description at the client that is based upon classification of entities of a database data model into entity types. The Office Action cites to column 5, lines 23-50 of Galea to suggest such a limitation. However, Applicants respectfully submit that the cited lines do not disclose or suggest receiving a description at the client device that is based upon classification of entities of a database data model into entity types. Rather, Galea recites GUI element types such as list boxes, multi-select list boxes, radio buttons, click boxes, input text fields, images that present the selections options for that domain, and optional domain tags that determine the run time behavior of each GUI element. *See*, Galea, column 5, lines 27-32. These GUI elements and the GUI database of Galea relate to entities of a user interface, whereas the entities recited in claim 20 are entities of a database data model that the user interface interacts with. As such, the Office Action is citing to entities that serve a completely different purpose than those entities of a

database data model recited in claim 20. Accordingly, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious receiving a description at the client device that is based upon classification of entities of a database data model into entity types.

Second, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. The Office Action cites to column 5, lines 23-50 of Galea in view of column 4, lines 29-57 of Cason.

Applicants respectfully submit that the cited lines of Galea address GUI elements to include within a user interface. However, Galea does not disclose or suggest when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface.

Moreover, Applicants respectfully submit that the cited lines of Cason merely recite an exemplary database modeling syntax. *See*, Cason, column 4, line 11. The syntax includes primary keys and other keys. *See*, Cason, column 4, lines 29-33. However, the reference does not disclose or suggest classification of an entity or key as a particular entity/key type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. In fact, nowhere does the reference disclose or suggest using the keys (e.g., primary or other keys) in creating elements within a particular window of a description of a user interface. As such, mere

citation to two different keys does not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface.

In view of the foregoing, Applicants respectfully submit that Galea, Cason, or their combination does not render claim 35 unpatentable. As claims 36-38 are dependent directly on claim 35, Applicants respectfully submit that claims 36-38 are patentable over Galea for at least the reasons discussed above for claim 35. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 35-38.

VI. Rejection of claims 42-44

In the Office Action, the Examiner rejected claim 42 under §103(a) as being unpatentable over Galea in view of Cason. Claims 43 and 44 are dependent directly on claim 42.

Claim 42 recites a computer readable medium of a computer system. The computer readable medium stores a computer program which when executed by at least one processor of the computer system generates a user interface. The user interface transacts with a database of a server device having a data model that includes several entities. The computer program has a set of instructions for receiving a description of the user interface. The description is based on classification of the entities into entity types. The classification includes the classification of an entity as at least a first entity type for which a user interface element is created within a first window of a set of windows in the

description of the user interface to access the entity upon determination that the entity satisfies a set of conditions and a second entity type for which a user interface element is created within a second window of the set of windows in the description of the user interface to access the entity upon determining that the entity does not satisfy the set of conditions. The computer program has a set of instructions for generating the user interface with at least one user interface element using the description of the user interface.

For at least the following reasons, Applicants respectfully submit that Galea, Caron, or their combination does not render obvious the computer readable medium of claim 42. *First*, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious classifying an entity as a first entity type for which a user interface element is created within a first window of the user interface description or a second entity type for which a user interface element is created within a second window of the user interface description. Specifically, neither Galea nor Cason disclose or suggests classifying an entity for the purpose of defining a user interface element in a first window or a second window of the user interface.

The Office Action cites (1) column 6, lines 20-34 of Galea, (2) column 10, lines 44-57 of Galea, (3) column 5, lines 51-59 of Galea, and (4) column 4, lines 29-57 of Cason to suggest the limitation. *See*, Office Action, page 29. However, none of the cited lines relate or reference classifying database entities into entity types for which a user interface element is created within a first or second window of the user interface.

Second, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious receiving a description that is based upon classification of entities of a database data model into entity types. The Office Action cites to column 6, lines 20-34, column 10, lines 44-57, and column 5, lines 51-59 of Galea in view of column 4, lines 29-57 of Cason. However, none of the cited lines disclose or suggest classification of entities of a database data model. Column 6, lines 20-34 of Galea recites an automatically generated user interface, but is silent as to classifying entities of a database data model. Instead, the automatically generated user interface is derived from GUI element types such as list boxes, multi-select list boxes, radio buttons, click boxes, input text fields, images that present the selections options for that domain, and optional domain tags that determine the run time behavior of each GUI element. *See*, Galea, column 5, lines 27-32. These GUI elements and the GUI database of Galea relate to entities of a user interface, whereas the entities recited in claim 20 are entities of a database data model that the user interface interacts with.

Column 10, lines 44-57 of Galea specifies modeling “data by defining and binding relations between data items” and using GUI tags “to define relations between the data and the graphical representation of the data”. However, as is evident to one of ordinary skill in the art, these lines do not disclose or suggest receiving a description that is based upon classification of entities of a database data model into entity types. Similarly, column 5, lines 51-59 of Galea does not disclose or suggest receiving a description that is based upon classification of entities of a database data model into entity types. Lastly, column 4, lines 29-57 of Cason recite dividing attributes into key and

non-keys. However, the cited lines do not disclose or suggest receiving a description that is based upon classification of entities of a database data model into entity types.

Accordingly, Applicants respectfully submit that Galea, Cason, or their combination does not render claim 42 unpatentable. As claims 43 and 44 are dependent directly on claim 42, Applicants respectfully submit that claims 43 and 44 are patentable over Galea, Cason, and their combination for at least the reasons discussed above for claim 42. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 42-44.

VII. Rejection of claims 46-51

In the Office Action, the Examiner rejected claim 46 under §103(a) as being unpatentable over Galea in view of Cason. Claims 47-51 are dependent directly or indirectly on claim 46.

Claim 46 recites a system that includes a first computer system and a second computer system. The first computer system includes a database that has a data model including several entities. The server is communicatively coupled to the database. The server creates a description of a user interface that transacts with the database. The description is based on a set of conditions that classify the entities into entity types. When an entity satisfies the set of conditions, the classification includes classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. The user interface element within the particular window provides access to the entity of the data model through the user interface. The second computer system includes a client for receiving

the description from the server and for generating the user interface as defined within the description.

Applicants respectfully submit that Galea, Cason, or their combination does not render the system of claim 46 obvious. *First*, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. The Office Action cites to column 5, lines 23-50 of Galea in view of column 4, lines 29-57 of Cason.

Applicants respectfully submit that the cited lines of Galea address GUI elements to include within a user interface. However, Galea does not disclose or suggest when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface.

Moreover, Applicants respectfully submit that the cited lines of Cason merely recite an exemplary database modeling syntax. *See*, Cason, column 4, line 11. The syntax includes primary keys and other keys. *See*, Cason, column 4, lines 29-33. However, the reference does not disclose or suggest classification of an entity or key as a particular entity/key type for which a user interface element is created within a particular window of a set of windows in the description of the user interface. In fact, nowhere does the reference disclose or suggest using the keys (e.g., primary or other keys) in creating elements within a particular window of a description of a user interface. As such, mere

citation to two different keys does not render obvious when an entity satisfies the set of conditions, classifying the entity as a particular entity type for which a user interface element is created within a particular window of a set of windows in the description of the user interface.

Second, Applicants respectfully submit that Galea, Cason, or their combination does not render obvious creating a description that is based on a classification of entities of a database data model into entity types.

The Office Action cites to column 5, lines 23-50 of Galea to suggest such a limitation. However, Applicants respectfully submit that the cited lines do not disclose or suggest creating a description that is based on a classification of entities of a database data model into entity types. Rather, Galea recites GUI element types such as list boxes, multi-select list boxes, radio buttons, click boxes, input text fields, images that present the selections options for that domain, and optional domain tags that determine the run time behavior of each GUI element. *See*, Galea, column 5, lines 27-32. These GUI elements and the GUI database of Galea relate to entities of a user interface, whereas the entities recited in claim 20 are entities of a database data model. As such, the Office Action is citing to entities that serve a completely different purpose than those entities of a database data model recited in claim 46.

Furthermore, column 4, lines 29-57 of Cason recite dividing attributes into key and non-keys. However, the cited lines do not disclose or suggest creating a description that is based on a classification of entities of a database data model into entity types.

In view of the forgoing, Applicants respectfully submit that Galea, Cason, or their

combination does not render claim 46 unpatentable. As claims 47-51 are dependent directly or indirectly on claim 46, Applicants respectfully submit that claims 46-51 are patentable over Galea, Cason, and their combination for at least the reasons discussed above for claim 46. As such, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 46-51.

VIII. Rejection of claims 52-57

In the Office Action, the Examiner rejected claim 52 under §103(a) as being unpatentable over Galea in view of Cason. Claims 53-57 are dependent directly or indirectly on claim 52.

Claim 52 recites a computer that includes a description specifying a user interface for transacting with data sets of a data store. The computer includes a browser for communicatively coupling to a server application of a different computer that provides a single point of access to the data store. The computer includes an application for generating user interface elements of the user interface by using the description and by retrieving a data set from the data store to populate at least one user interface element. The user interface elements are for displaying in the browser, where at least one user interface element is for receiving queries for the data store.

Applicants respectfully submit that Galea does not disclose the computer of claim 52. For instance, Galea does not disclose a computer that includes an application for generating a user interface by using the description and by retrieving a data set from a table of the data store to populate at least one user interface element. The Office Action cites column 5, lines 51-59 of Galea to suggest such a limitation. *See*, Office Action, page

34. Specifically, these lines state that all valid information and possible configurations are downloaded at one time from the server to the client so that the user can browse the information without accessing the server. *See*, Galea, column 5, line 60-column 6, line 2. In other words, Galea describes sending a file that includes all configuration information for the user interface at once. As such, the references does not disclose or suggest an application that retrieves a data set from a table of the data store to populate at least one user interface element of the user interface.

Accordingly, Applicants respectfully submit that Galea does not render claim 52 unpatentable. As claims 53-57 are dependent directly or indirectly on claim 52, Applicants respectfully submit that claims 53-57 are patentable over Galea for at least the reasons discussed above for claim 52. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 52-57.

IX. Rejection of claims 58 and 63

The Office Action rejected claim 58 under 35 U.S.C. §103(a) as being unpatentable over Galea in view of Cason. Claim 63 is dependent directly on claim 58.

Claim 58 recites a method that receives a first request for a first user interface of a first client to transact with a first data store. The method generates a first description to supply to the first client in order for the first client to generate the first user interface. The method receives a second request for a second user interface of a second client to transact with a second data store. The method generates a second description to supply to the second client in order for the second client to generate the second user interface. The first and second descriptions differ.

Applicants respectfully submit that the references or their combination does not render obvious generating a first description in order for the first client to generate the first user interface and a second description in order for the second client to generate the second user interface where the first and second user interfaces are different. The Office Action cites to column 4, lines 1-5 of Galea that recites a configuration file that is mapped to several pages at a client and a page is updated directly from the configuration file. The Office Action also states that the client 106 (first client) and client 108 (second client) can access the server for different user interfaces. *See*, Office Action, page 39.

Applicants respectfully submit that the reference does not disclose or suggest that different user interfaces are generated for each client. Specifically, updating a page does not disclose or suggest generating a first user interface for a first client and generating a second user interface for a second client where the user interfaces are different. In fact, the reference suggests the opposite whereby the same user interface is generated for both the first and second client. Specifically, the reference states “[a]fter a user accesses the domain through client 106, 108, the compiled configuration model is downloaded to the browser of claim 106, 108.” *See*, Galea, column 5, lines 56-59. These lines state that the same configuration model is downloaded to the first and second clients. As such, the reference teaches generating the same user interface for each of the first and second users.

Accordingly, the references or their combination does not render obvious generating a first description in order for the first client to generate the first user interface and a second description in order for the second client to generate the second user

interface where the first and second user interfaces are different. As claim 63 is dependent directly on claim 58, Applicants respectfully submit that claim 63 is patentable over the references and their combination for at least the reasons discussed above for claim 58. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 58 and 63.

X. Rejection of claims 59-62

In the Office Action, the Examiner rejected claim 59 under §103(a) as being unpatentable over Galea in view of Cason and further in view of Mashayekhi. Claims 60-62 are dependent directly or indirectly on claim 59.

Claim 59 recites a method for providing descriptions of user interfaces to users. The method receives a first request from a first user. The first request includes a set of preferences specified by the first user. The method receives a second request from a second user. The second request includes a set of preferences specified by the second user. The first and second users specify different sets of preferences. The method generates a first description that is customized according to the first user's set of preferences to supply to the first user and a second description that is customized according to the second user's set of preferences to supply to the second user. The first and second descriptions are different based on the set of preferences specified by the users.

Applicants respectfully submit that the combination of references do not render the method of claim 59 obvious. For instance, the cited references, alone or in combination, do not render obvious generating a first description customized according

to the first user's set of preferences and a second description customized according to the second user's set of preferences, where the first and second user interfaces are different. The Office Action cites to column 4, lines 1-5 of Galea that recites a configuration file that is mapped to several pages at a client and a page is updated directly from the configuration file. The Office Action also states that the client 106 (first client) and client 108 (second client) can access the server for different user interfaces. *See*, Office Action, page 39.

Applicants respectfully submit that the reference does not disclose or suggest that different user interfaces are generated for each client. Specifically, updating a page does not disclose or suggest generating a first user interface for a first client and generating a second user interface for a second client where the user interfaces are different. In fact, the reference suggests the opposite whereby the same user interface is generated for both the first and second client. Specifically, the reference states “[a]fter a user accesses the domain through client 106, 108, the compiled configuration model is downloaded to the browser of claim 106, 108.” *See*, Galea, column 5, lines 56-59. These lines state that the same configuration model is downloaded to the first and second clients. As such, the reference teaches generating the same user interface for each of the first and second users.

Moreover, the Office Action states that Galea in view of Cason does not explicitly teach the limitations “the first and second users having different authentication information”. *See*, Office Action, page 60. The Office Action then cites Mashayekhi to suggest such a limitation. Applicants have clarified claim 59 to recite that the different

first and second user interfaces are generated based on different sets of preferences specified by the first and second users. Applicants respectfully submit that neither Galea, Cason, or Mashayekhi suggest generating customized user interfaces based on different sets of user preferences provided by each of first and second users.

Accordingly, Applicants respectfully submit that the cited references do not render claim 59 unpatentable. As claims 60-62 are dependent directly or indirectly on claim 59, Applicants respectfully submit that claims 60-62 are patentable over the cited references for at least the reasons discussed above for claim 59. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 59-62.

XI. Rejection of claims 80-83

In the Office Action, the Examiner rejected claim 80 under §103(a) as being unpatentable over Galea in view of Cason. Claims 81-83 are dependent directly or indirectly on claim 80.

Claim 80 recites a computer implemented method for automatically generating a user interface to access a database. The method receives a request for the user interface from a client. In response to the request, the method obtains a current data model describing several tables of the database. The method automatically generates a description of the user interface based on the current data model. The method sends the description to the client. The method receives a request for data from at least one table of the database to populate at least one user interface element of the user interface. The method retrieves the data from the database. The method sends the data to the client in

order to allow the client to populate the user interface element. The client is then enabled to generate the user interface which permits a user of the client to transact with the database.

Applicants respectfully submit that the combination of references do not render the method of claim 80 obvious. For instance, the cited references, alone or in combination, do not render obvious in response to the request, obtaining a current data model describing a plurality of tables of the database. Neither Galea nor Cason disclose this limitation because neither reference discloses or suggests obtaining a data model that describes tables of the database. Instead, Gelea describes compiling and binding domain element which represent data records as opposed to tables. Similarly, Cason relates to the actual data entries within the database as opposed to the tables.

Accordingly, Applicants respectfully submit that the cited references do not render claim 80 unpatentable. As claims 81-83 are dependent directly or indirectly on claim 80, Applicants respectfully submit that claims 81-83 are patentable over the cited references for at least the reasons discussed above for claim 80. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 80-83.

XII. Rejection of claims 84-86

In the Office Action, the Examiner rejected claim 84 under §103(a) as being unpatentable over Galea in view of Cason. Claims 85 and 86 are dependent directly or indirectly on claim 84.

Claim 84 recites a method for providing a user interface. The method obtains a data model of a database. The data model represents an organization of several data entities of the database. The method receives a request for a user interface from a client. In response to the request, the method dynamically creates a description of the user interface. The user interface is dynamically generated by using a set of heuristics to select a set of data entities from the several data entities of the data model. The selected set of data entities are for access by the client through a primary window of the description based on a relevancy of the set of data entities to the client. The user interface is dynamically generated by providing a set of tasks that are operable on each data entity. The method sends the description to the client in order to allow the client to generate the user interface from the description. The user interface includes user interface elements that permit a user of the client to implement one of the tasks in order to transact with the database in a manner conforming to the data model.

Applicants respectfully submit that the combination of references do not render the method of claim 84 obvious. For instance, the cited references, alone or in combination, do not render obvious dynamically creating a description of the user interface by using a set of heuristics to select a set of data entities from the plurality of data entities for access by the client through a primary window of the description based on a relevancy of the set of data entities to the client. Similarly, Cason does not disclose or suggest heuristics that are used to select data entities based on a relevancy of the entities to a client. Rather, Cason provides user interfaces for interfacing with data models of different syntaxes. Accordingly, Applicants respectfully submit that the cited

references, alone or in combination, do not render obvious dynamically creating a description of the user interface by using a set of heuristics to select a set of data entities from the plurality of data entities for access by the client through a primary window of the description based on a relevancy of the set of data entities to the client.

Accordingly, Applicants respectfully submit that the cited references do not render claim 84 unpatentable. As claims 85 and 86 are dependent directly or indirectly on claim 84, Applicants respectfully submit that claims 85 and 86 are patentable over the cited references for at least the reasons discussed above for claim 84. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 84-86.

XIII. Rejection of claims 87-88

In the Office Action, the Examiner rejected claim 87 under §103(a) as being unpatentable over Galea in view of Cason. Claim 88 is dependent directly or indirectly on claim 87.

Claim 87 recites a computer implemented method for automatically generating a user interface to access a database. The method sends a request for the user interface to a server. The request includes a set of user preferences. In response to the request, the method receives a computer generated description specifying a user interface that is customized according to the set of user preferences. The user interface is for accessing a data store from the server. The method generates the user interface by creating user interface elements for the user interface based on the description, receiving data stored in the data store from the server, and populating at least one user interface element with the

data. The generated user interface allows a user to interact with the data store using the user interface elements.

Applicants respectfully submit that the combination of references do not render the method of claim 87 obvious. For instance, the cited references, alone or in combination, do not render obvious receiving a computer generated description specifying a user interface that is customized according to the set of user preferences, the user interface for accessing a data store from the server. The user interfaces of Galea and Cason do not disclose or suggest being customized according to a set of user preferences provided by a client that access a server. Specifically, neither reference disclose or suggest sending a set of user preferences from a client to a server that then result in the client receiving a computer generated description specifying a user interface that is customized according to the set of user preferences, the user interface for accessing a data store from the server.

Accordingly, Applicants respectfully submit that the cited references do not render claim 87 unpatentable. As claim 88 is dependent directly or indirectly on claim 87, Applicants respectfully submit that claim 88 is patentable over the cited references for at least the reasons discussed above for claim 87. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 87 and 88.

Conclusion

In view of the foregoing, it is submitted that all pending claims, namely claims 20-27, 31-32, 35-38, 42-44, 46-53, 56-63, and 75-88 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance is earnestly solicited at the earliest possible date.

Applicants have submitted all known fees. Applicants believe that no additional fee is required for the submission of this amendment and response. However, in the unlikely event that the Commissioner determines that additional fee, extension and/or other relief is required, Applicants petition for any required relief including extensions of time. Moreover, Applicants authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-3804** referencing APLE.P0004C.

Respectfully submitted,

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